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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/973,018

03/25/1998

MATS LEIJON

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EXAMINER

MULLINS, BURTON S

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 08/973,018	<b>Applicant(s)</b> LEIJON ET AL.	
	<b>Examiner</b> Burton S. Mullins	<b>Art Unit</b> 2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10,13-18,20-34,37,38,41 and 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10,13-18,20-34,37,38,41 and 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Suspension of Action***

1. Pursuant to the Board of Appeal's final decision regarding U.S. Application No. 08/973,019, suspension has been lifted. As set forth in the decision on petition requesting suspension, the instant application was granted a suspension pending the decision on appeal of the '019 application. On November 27, 2002, the Board affirmed the rejection of the '019 application and on August 27, 2003, the Board denied applicant's request for reconsideration, thus terminating prosecution of the '019 application. An action on the merits follows.

### ***Claim Objections***

2. Claim 37 is objected to because of the following informalities: on the last line, insert –are– after “layer”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 does not appear to depend from a claim.

### ***Claim Rejections - 35 USC § 112***

4. Claims 1-10, 13-18, 20-34, 37-38 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

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subject matter which applicant regards as the invention. In claim 1, lines 4-5, recitation “including a plurality of insulated conductive elements, and at least one insulated conductive element” makes no sense. Does applicant mean –at least one uninsulated conductive element--?

In claim 37, the phrase “including an inner layer...surrounding the solid insulation” lacks a clear antecedent. Does the cover or the cable include this inner layer?

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titus (US 5,550,410) in view of Elton (US 4,853,565). Titus discloses a hydrogenerator plant including a generator 20 coupled to a turbine 16 via shaft 18 (Fig.1), the generator windings directly connected to the high voltage transmission network 60 (c.2, lines 45-52). Titus does not teach generator details of “one winding including a conductor, a solid insulation covering including an inner layer having semiconducting properties, a solid insulating layer surrounding the inner layer and an outer layer having semiconducting properties surrounding the insulation layer...and the inner layer forms an equipotential surface about the conductor.”

Elton teaches a high-voltage, electrical cable 100 (Fig.7) comprising current-carrying conductors 102; an inner, semi-conducting “grading” layer 104 made of pyrolized glass fibers (c.7, lines 19-20) surrounding and being in electrical contact with the current-carrying

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conductor 102; a solid insulation layer 106 surrounding and contacting the inner layer; and an outer layer 110 having semi-conducting properties surrounding and contacting the solid insulating layer 106, as well as being in contact with ground, to thus bleed off static charge and thus prohibiting development of corona discharge (c.7, lines 23-28; lines 64-68).

It would have been obvious to modify Titus and provide a cable with semiconducting properties per Elton for the stator winding since this would have been desirable to prevent corona discharge.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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8. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-3, 5-10, 15, 24, 29-30, 34, 37-38, 41 and 50 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over independent claims 32 and 33 or, alternatively, claims 55 or 61 of copending Application No. 10/603,802, and further dependent claims as noted below. Although the conflicting claims are not identical, they are not patentably distinct from each other because the “high-voltage rotating electric machine” in claims 32, 55 and 61 of the ‘802 application is generic to the “hydrogenerator plant for connection to a high voltage transmission or distribution network comprising: at least one rotating electric machine for high voltage coupled to a turbine via shaft means” in claims 1, 34 and 50 and the “hydrogenerator plant” of claim 37 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding claim 2, claim 38 of the ‘802 application recites the same coefficient of thermal expansion feature.

Regarding claim 3, claim 41 of the ‘802 application recites a core.

Regarding claim 5, see claims 61 and 70 of the ‘802 application.

Regarding claim 6, see claim 33 of the ‘802 application.

Regarding claim 7, see claim 34 of the ‘802 application.

Regarding claim 8, see claim 35 of the ‘802 application.

Regarding claim 9, see claim 36 of the '802 application.

Regarding claim 10, see claims 61 and 65 of the '802 application.

Regarding claim 15, see claims 35 and 36 of the '802 application.

Regarding claim 24, claim 46 of the '802 application reads on a "directly connectable" machine, i.e., with no transformer.

Regarding claims 29-30, see claims 55 and 57-59 of the '802 application.

Regarding claims 37-38, 41 and 50, see claims 61-41 of the '802 application.

#### ***Allowable Subject Matter***

10. Claim 50 (and claims dependent therefrom) would be allowable if applicant timely files a terminal disclaimer in compliance with 37 CFR 1.321(c). Claim 50 includes the limitation that the conductor comprises a plurality of insulated conductive strands and at least one uninsulated electrically conductive strand in contact with the inner layer having semiconductive properties.

The prior art, in particular Schuler (US 4,308,476) teaches a bar winding for electrical machines including at least one of a plurality of insulated conductive elements 1 surrounded by insulation 11 (Fig.3) and at least one uninsulated conductive element 1' (Fig.3). Schuler's bar winding structure provides an electrostatic shield to improve electric field homogeneity within the insulation (c.2, lines 22-28); however, there is no specific motivation or suggestion for use of both insulated and non-insulated conductive elements or strands, so that it cannot be properly combined with prior art such as Titus or Elton. Also, given that Schuler's insulated and non-insulated conductive elements 1 and 1' are surrounded by insulation 7, with

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conductive strips 5 at either end of the winding, it is not clear how the uninsulated elements would “contact the inner [semi-conductive] layer such that said conductor and inner layer are at the same potential” as claimed.

A second reference, Takaoka (US 5,094,703), is directed to a high voltage transmission line cable with insulated and uninsulated conductor strands, not a high voltage cable useful as the stator windings in hydrogenerator rotating machine, and thus is not properly combinable with Titus and Elton.

11. Claims 1 and 37 (and claims dependent therefrom) would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action, and if applicant timely files a terminal disclaimer in compliance with 37 CFR 1.321(c). For the same reasons as cited above with regard to claim 50, the prior art does not teach a winding formed of a conductor including a plurality of insulated conductive elements or strands and at least one uninsulated conductive element or strand, with the uninsulated element or strand contacting an inner semiconducting layer so that the uninsulated conductor or strand and the inner layer are at the same potential.

### ***Information Disclosure Statement***

12. The information disclosure statements submitted on August 7, 2000 and April 9, 2001 have been considered by the examiner.



*Conclusion*

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Burton S. Mullins  
Primary Examiner  
Art Unit 2834

Bsm  
March 10, 2004